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THE FUTURE OF PUBLIC UTILITY INVESTMENTS

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The expansion of public utilities and the enormous increase in public utility investments during the past twenty-five years have been among the most remarkable economic developments of a remarkable period in the nation's history. Street railways, electric light and power plants and telephone systems have multiplied in number and increased in size out of all proportion even to the rapid increase of urban population during this period. The development of gas plants has been more steady, but water works, representing for the major part municipal investments, have necessarily developed with great rapidity, since the growth of cities, and especially their crowding together in the more densely populated sections of the country, increases both the relative difficulty and the relative expense of securing adequate water supplies. In attempting to forecast the developments of the next ten, twenty or thirty years, we are met by many uncertainties. Assumptions must be made. The easiest ones to make are that the increase of the total population and the relative increase of the urban population will continue in the future to go along as they have in the immediate past and that the development of public regulatory policies will hold the even tenor of its way, regardless of war's alarms and the expected truculencies of the new breed of powder-and-shell millionaires created by the war. These are rather violent assumptions, but for the purpose of this discussion I shall make them, with the hope that any conclusions reached may be subject to easy modification by other people who think themselves in a position to make different and wiser hypotheses.

EXTENT AND CAUSES OF UTILITY INVESTMENTS

The total nominal investment at the present time in what are ordinarily described as public utilities, in which I include street and interurban railways, artificial and natural gas plants and pipe lines, electric light and power systems, including water power developments, local and long-distance telephones, water works, central

heating plants, electrical conduits, etc., must be about twelve billion dollars. The average annual increase in these investments during the past decade must have been about five hundred million dollars. How much of the grand total and of its annual increments is inflation, nobody knows. But in the city of New York alone, the actual investments in water works and rapid transit lines during the decade from 1907 to 1917 will have been more than half a billion dollars, to say nothing of the additional investments in surface street railways, lighting plants, telephones, etc. Upon the assumptions already made, it seems safe to estimate that the demand for additional capital for public utilities in this country will continue to be about half a billion dollars a year; it may be considerably more.

The fundamental causes which have hitherto brought about the rapid increase in public utility investments may be briefly analyzed. Public utilities are urban phenomena; they are the instruments by which the economic advantages of city life are multiplied and its disadvantages lessened or removed. Their development up to the full realization of their economic value under the prevailing conditions of human knowledge and skill is inevitable. It is readily observed that the larger an urban community becomes, the more dependent are its inhabitants upon public utility services. Furthermore, in the case of the leading utility, transportation, along with this increasing dependence goes the necessity for a larger *quantity* of service per capita. This is well illustrated in the development of urban transit in New York. Over a period of fifty years the number of street railway fares annually paid per capita increased from 43 in 1860 to 321 in 1910. Even after the electric trolley system had been fully developed, the increase for the decade from 1900 to 1910 was 75 rides per capita, or more than 30 per cent. Moreover, in a rapidly growing community, public utility investments tend to lag behind the demand for them and therefore, even when a city's growth slackens or stops entirely, the demand for public utility expansion still continues until the community has spread itself out, provided itself with all the necessary conveniences of modern life and settled down into a static condition.

Just so long as the population of a city continues to press out into outlying districts or to shift from one district to another, even though there may be no actual increase in the aggregate number of

people or in the quantity of utility service required, new investments will be necessary; since existing investments in pipes, wires, tracks and other street fixtures cannot readily be moved from one place to another to follow the shifting population. We may revert again to New York for an illustration. Here through a long period of years the old city grew to the north, developing the superlative congestion that has come to be characteristic of Manhattan Island. Within the period of fifteen years from 1904 to 1919, the number of continuous transit tracks crossing the East River by bridge or tunnel will have increased from four to thirty-eight, with the inevitable result that a great shifting of population from the crowded districts of Manhattan Island to the nearby but hitherto sparsely settled districts of Long Island will take place. If we assume no total increase in the population of the city, this transfer from one section to others, without releasing any of the existing public utility investments required for the service of the old congested district, will necessitate large additional investments in the new districts.

OTHER REASONS FOR EXPANSION

A further increase in the demand for utility services comes as a result of the general advance in the arts and the general rise in the standards of living of the people, both of which are concomitants of a developing civilization. I may cite as illustrations the effect of modern plumbing upon the amount of water used and the increase in the use of gas and electricity for heat and power as a result of the installation of modern appliances for lessening the drudgery of housekeeping. But even more important in its effect upon the development of public utilities is the increasing use of gas and electric current for power in connection with the processes of industrial life. Another reason for the expansion of public utility investments is the more complex organization of social and industrial life, which is largely the result of improved facilities for transportation and communication and which in turn necessitates a continual increase in these facilities. It seems obvious that the relative importance of transportation and communication necessarily increases with the growing complexity of social organization. This is particularly true of the telephone as a primary means of communication for social and business purposes, and of course applies with equal or

greater force to facilities for the transportation of food products and other commodities. But these latter facilities are primarily furnished by the railroads of the country and do not fall within the class of public utilities as here defined except to a limited extent in connection with suburban and interurban railways.

There still remain to be considered two important factors in the expansion of public utility investments. I have referred to public utilities as urban phenomena, yet the fact is that the characteristics of urban life are fast becoming the characteristics of life throughout the country. In other words, the suburban and rural districts are rapidly becoming urbanized and the extension of public utility services beyond the limits of urban communities is the essential means by which this process is being carried on. It is the telephone, the trolley, the electric light and running water that herald the advance of urban civilization and comfort into the rural districts. Indeed we might properly refer to these utilities as the promoters or sales agents of the economic and social advantages hitherto characteristic of urban life. This territorial expansion of utility services means generally an even greater investment in proportion to the population served than the investment required for strictly urban service. The other factor to which I wish to call attention is the development of natural resources as the basis for these public utility services. It has been only a comparatively few years since water power became an important element in the electrical industry, and the development of water power is believed to be still in its infancy. The whole problem of the conservation and development of these natural resources, though it is regarded as in large measure, if not primarily, a problem of the federal government, is in effect a municipal problem, namely, how best to bring to the people in their urban communities the resources which nature has provided in the wilderness. The same is true of the development of natural gas fields and the construction of interstate and intercity pipe lines. But while water power is as everlasting as climate, there is great uncertainty as to the time when the reservoirs of natural gas hidden away in the bowels of the earth will become exhausted. Therefore, it would be unsafe to make any prediction as to the probable demands for additional capital in the development of the natural gas supply and its transmission to the urban communities where it can be used.

ENORMOUS SPECULATIVE GAINS

Up to the last few years, public utility investments were regarded as properly speculative. It is hard now to realize how valuable a street car franchise in a great city was supposed to be in the last two decades of the nineteenth century, the period during which the Broadway franchise was bribed through the New York City board of aldermen and the inverted pyramid of the Metropolitan Street Railway system was formed. A perpetual franchise on Manhattan Island was supposed to be an inexhaustible gold mine. Many of the large fortunes built up in different parts of the country were the direct results of the manipulation of public utility securities and the sale of public utility franchises that had been acquired for a song. By men of substance it was regarded as perfectly proper, and by the common rabble as almost so, for the owners of a public utility to take millions out of it. Competitive franchises were granted in the vague and vain hope on the part of the public that thereby monopoly would be scotched, service improved, public revenues increased and in some cases rates reduced. These competing franchises were sought with fair promises on the lips of the promoters, but with greedy purposes in their hearts. They were sought chiefly for the purpose of being sold at the Blackmailers' Auction. Fixed rates, monopoly privileges, universal necessity and rapidly increasing urban population, made promoters willing to accept short-term franchises where they could not get long-term or perpetual ones and to invest enormous sums of other people's money in plants whose status at the expiration of the franchises was wholly unsecured except by the necessity that the service be continued and by the hope that renewals could be had at the same public bargain counter where the originals had been procured. While it is probable that more fortunes have been made out of street railway franchises than out of any other kind, speculation and profit-taking were by no means confined to this utility. In the early days gas and water franchises and later electric light and telephone grants were involved in the same riot of speculation.

TAXATION ONLY A PARTIAL REMEDY

The first attack upon franchise privileges was by means of increased taxation, on the theory that the public, having contributed the rights of way for the tracks, pipes, wires and conduits,

ought to have a larger share in the profits. Unquestionably taxation, in so far as it takes new forms and becomes more drastic, will have the effect of decreasing the profits of the utility owners and thereby of reducing the value of their franchises without giving any direct relief to the consumers. The amount of actual capital invested in public utilities is not directly affected one way or the other by taxation, but as long as franchise and other intangible values make up a large part of the backing for utility securities and represent a large share of the so-called "investment," taxation, and still more taxation, will have a tendency to reduce or destroy these intangible values and knock the props out from under the securities. The copiousness and continuity of the stream of gold that pours into the lap of a public utility makes it a shining mark for the tax gatherer, with the result that in spite of the tremendous political power of the utility owners, they have been compelled more and more to submit to additional exactions in the form of higher assessments and special taxes, until at the present time their groanings assault the ears of every official who has anything to do directly or remotely with taxation or the control of public utilities. It is evident, however, that unless public utility rates are irrevocably fixed, the burdens of taxation, after it has destroyed intangible values, and often before that time if the utility managers are strong and cunning, will be shifted to the patrons of the utility in the form of higher rates or poorer service.

RATE REGULATION MORE EFFECTIVE

When division of profits through the instrumentality of taxation had been tried for a while, the public began to attack the problem more directly through rate regulation. The rate payers revolted against being exploited for the relief of the taxpayers. When the theory of the regulation of rates and services by means of permanent local or state commissions came into vogue, it struck a body blow at the philosophy of speculation in utility investments, but however bankrupt their philosophy became, the owners of utility securities were impelled by all the primary incentives of self-preservation to resist step by step to the bitter end the encroachments of the state upon their privileges. It is the theory of rate regulation that the investment in a public utility is affected with a public interest and that the owners of the utility are entitled to earn

a fair rate of return and no more upon their capital prudently and usefully invested in the public service. This theory, if consistently and unflinchingly applied, would eliminate most of the speculative element in utility investments and reduce them to an approximate parity with municipal investments, where the security is nearly perfect and the rate of return is low.

THE PRESENT CONTEST OF VITAL SIGNIFICANCE

We are now in a transition stage, striving to put into effect this new theory and being met at every stage by the strong entrenchments of vested privilege. It is still too early to determine the outcome of this great war. If democracy, overflowing the land, gradually isolates and smothers the citadels of privilege and succeeds in establishing the theory that public utilities shall be operated as public business, and public utility investments shall be secure and by virtue of such security low-paid, we may at least expect that the conquered will react upon and modify the character of the conquerors. The great struggle now going on throughout the United States is to establish the recognized value of public utility and railroad investments. The owners are driving hard for the legal recognition of enormous values based upon physical structures supplemented by ancient privileges and fertile imaginations. They are doing their best to embalm the fat carcasses of old speculations lest they be decomposed and pass to final dissolution. They say that regulation and scientific franchise principles are all right for the future, but for the Lord's sake, do not disturb the past; well knowing that unless we succeed in disturbing the past, the future will be theirs.

At this stage of the struggle it is not easy to forecast the conditions under which public utility investments will actually be made during the next twenty years. The public pressure for a reduction of rates through the exercise of the police power is a continuing force tending to the elimination of the speculative element in public utility investments. At the same time this force, if it is not supplemented by measures calculated to give security to the investment, will tend to drive capital into other fields and to induce stagnation in the development of public utilities. Such a result would be most unfortunate, as in the long run it would involve enormous urban discomforts. There is nothing more vital to the wel-

fare of growing cities than the free and anticipatory expansion of public utility services. When these cease to expand, a city becomes like a foot that has outgrown its shoe. If, however, security follows as a hand-maiden upon rate reduction, unless the latter goes altogether too far, the attractiveness of public utility investments will not be diminished; they will merely appeal to another class of investors, namely, to those who are willing to accept a low return with security.

FACTS THE PUBLIC MUST RECOGNIZE

The idea that private investments in utilities represent capital temporarily loaned in aid of public credit is the logical conclusion of the non-speculative theory, but many important changes in public policy, as yet hardly initiated, will be necessary before this theory and this conclusion can be fully crystallized into practice. On the one side the public must definitely learn that it cannot eat its cake and have it too. Public service corporations, if they are recognized as a necessary though intermediate agency for the satisfaction of urban needs, must not be harassed by demands that are financially impossible. The public hires them to perform certain services for it and it cannot hope to get these services at less than cost. The first and most fundamental corollary of the philosophy of public regulation of rates and service is the security of the investment and the assurance of a fair and constant return upon it. This security requires the giving up of many long-cherished illusions on the part of the public.

In the first place the fancied protection of maximum or absolute rates fixed by franchise contract for a long term of years must be surrendered. It must be frankly admitted that rate regulation involves the possibility of the increase as well as of the decrease of rates, whenever justice demands it. Especially, it must be frankly recognized that if the standards of service are to be raised year by year, the people who receive the improved service will have to pay for it. The public will also have to reconcile itself to the allowance of adequate depreciation funds out of which the physical plant can be safely maintained at the highest practicable degree of operating efficiency. The public will also have to give up once and for all its lingering fancy for competition in public utilities. It will have to recognize the principle that public regulation of rates and services

is adapted to monopoly and is inconsistent with competition. It will also have to accept the burden of the risk in public utility investments and forego the sweet pleasures of the ward politician and the cart-tail demagogue who would grant franchises for short periods without imposing upon the city any obligation to protect the property at the expiration of the franchise period.

The let-them-take-a-chance policy will have to be definitely discarded. All these changes in public sentiment and public policy will be more or less costly, either in money or in political feelings or in both. In return for this cost, however, the public will receive certain great and definite advantages. It will enlist the steadily responsive coöperation of capital that in its timidity seeks only self-preservation and a diet of herbs. It will secure the recognition of the characteristic obligation of monopoly, namely, to extend its services to satisfy and even to anticipate the reasonable needs of the community. It will secure the coördination of public utility services with the other services of government and establish a sure and steady control over the uses of the public highways. It will ultimately escape from the burden which it has been called upon to bear as a result of the capitalization of the increment in the value of land used for public utility purposes. Most important of all, it will gradually rid itself of the political poison inherent in the "grabbing" of franchises and the regulation of public affairs by utility corporations.

Under all the circumstances, it seems reasonable to anticipate that the need of additional capital to be invested in the expansion of public utility plants will go on in the future much as it has in the past, say, at the rate of half a billion dollars a year in this country; that for some time to come, in spite of this need, capital will hesitate about going into public utilities in those communities where its chance of speculative profit is removed and no compensating security given; that, ultimately, through the full triumph of the theory of public service, there will be a free flow of non-speculative capital into public utilities to the extent that the consuming public is able and willing to pay for the expansion of the service.